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## THE FINWHALE FISHERY OFF THE LAPLAND COAST.

BY ALFRED HENEAGE COCKS, M.A., F.Z.S.

THE Finwhaling off the Lapland coasts during 1887 produced one hundred whales less than the total of the previous year. There was a diminution of two in the number of companies engaged in the last season's fishery, and seven vessels. The number of whales per vessel, therefore, was greater (by two and a fraction each) last season than in the previous year.

I have to thank several of the Managers for again sending me returns of their doings, and Capt. G. Sørensen (late Manager of the Haabet Company, now Harbour-master at Vardö) for a list of the numbers killed by most of the Companies; but I was prevented (by a somewhat severe accident) from visiting any of the factories last year, and there are consequently some unavoidable gaps in the returns. These gaps I have ventured to fill up, in the list at the end of this paper, by guess-work, so as to endeavour to arrive at the approximate number of each species obtained. These guesses are distinguished by the use of Roman figures, so that no one is bound to accept them who considers this too imaginative a method of arriving at statistics. I think, however, that the totals so obtained must be accurate enough to allow of the deduction that the take of Blue and Common Rorquals numbered little over two-thirds, and that of Humpbacks not much over one-third of the totals in 1886, while the number of Rudolphi's Rorquals killed was nearly six times the total of 1886.

Nearly half the total of this last-named, however, were obtained by Capt. Bull, off West Finmarken, who captured the extraordinary number of 110, and at the same time obtained the largest number of Blue Whales of any of the companies. The other companies caught an average of seven Rudolphi's Rorquals apiece. As Captain Horn at Jeretiki obtained three, and the easternmost of the Norwegian boats caught just the average number, this species evidently extended itself very generally along the whole coast at least to beyond the Russian frontier.

The whalers always run their passage northwards, "inden-skjærs,"—that is, inside the fringe of outlying islands,—and consequently if they happen to cross West Fjord in the dark, or in rough weather, they frequently see no whales until they are to the eastward of the North Cape, or even throughout the passage.

Capt. Horn first saw whales—Common Rorquals and Humpbacks—on his outward passage, on March 22nd, from the Nordkyn eastwards. Capt. Aloff (of the 'Nimrod') reports that he saw no whales on his outward passage until after they had passed Tanafjord, on April 4th, and then "only very occasionally, but they were probably much farther out to sea."

Capt. Berg, of Syltefjord, who reached his factory on March 26th, observed no whales on his passage north. Two days later he started on his first trip after whales, and captured a Common Rorqual. He found several of that species, as well as Humpbacks, all along the coast from Nordkyn to the eastwards of Vardö, about eight (? English) miles off shore. The latter species soon disappeared, but the Finwhales continued their stay up to the middle of May, mostly close in shore, or in the Fjords. In the Syltefjord they were often seen in large numbers, even inside the village, which is inhabited during the cod-fishing season only. This was especially the case from the 20th to the 30th of April, at the same time as very good catches of cod were being made in the Fjord.

During the fishing season no whales may be hunted within three English miles of the land, but the weather being occasionally pretty good, some stragglers would frequently be found taking an airing outside the boundary, where the whalers speedily pounced down upon them, and succeeded in capturing several. The Capelan (Norw. Lodde = *Mallotus arcticus*) were plentiful off the

Finmarken coast in the month of April; they no doubt were the attraction both to the Cod and the Common Rorquals.

Capt. Aloff (of the Laurvig Co.) writes:—"During the first half of April, many Common Finners remained under the Norwegian coast, from Baadsfjord to beyond Vardö; and during the last eight days of April and the first (few) in May, under the Murman coast as well. During the first half of July many Common Finners were seen off the North Cape, some of them of small size. More Blue Whales were seen congregated, this year, between Tana and the Nordkyn, than during the last couple of years."

About the middle of May the whales disappeared, and Capt. Berg did not see a single individual again, until June 21st, when he shot a Rudolphi's Rorqual, about thirty miles north of North Cape.

During the last few days of June there was a great number of Common Finners about thirty or forty miles to the north-east of North Cape, where most of the whalers killed a few. Capt. Berg meanwhile caught two Blue Whales and one Common Finner off the Syltefjord. At the beginning of July there was a shoal of Blue Whales off the Nordkyn, where some were captured. With the exception of the two above-mentioned shoals or schools, Capt. Berg did not notice any number of whales together during the summer; they were generally found in twos and threes.

Blue Whales were rather scarce this season along the East Finmarken coast. Capt. Berg captured one as early as the 10th of May, but this was quite a straggler, and few, if any, others were seen before the middle of June. Vessels bringing out coal from England reported large schools of Blue Whales in July, from the Lofoten Islands up to the North Cape, about forty or fifty miles off shore. There was also a good number of Blue Whales about the same time round Söröen, and to the eastward of Kildin Island on the Murman coast.

Capt. Bull, of Söröen (West Finmarken) also mentions the great number of whales reported by the sailing vessels coming from England, between the Lofotens and the coast of the province of Nordland, but calls them Common Rorquals. Hardly any seamen besides whalers know the different species of whale by sight, but while both kinds may have been present, the latter at

least seems likely to have been there, for as Capt. Bull suggests, their presence may have been connected with the quantity of herrings observed and caught during the same time, from Bodö up to Lödingen.

Capt. Bull reports that from the latter half of June, through July, a number of Rudolphi's Rorquals were seen round Loppen Island, and in Sörö Sound, also by Skjærvö in Kvenangen Fjord, right up to Reisen. A reference to the list at the end of this paper will show that he captured the astonishing number of 110 of this species! Capt. Berg says that in July they were sometimes seen in small numbers to the eastward of the North Cape; the average take of this species for the companies of which I have returns—omitting Capt. Bull's—being about  $4\frac{2}{3}$  per vessel. Of course the fact must not be lost sight of, that these smaller whales are not hunted when bigger game is to be found.

Capt. Bull captured his last Rudolphi, and his last whale for the season, on August 12th; his first Rudolphi was obtained on May 21st. Of the two remaining species, his first Common Rorqual was killed on April 16th, and his last on August 6th; his first Humpback—his first whale for the season—on March 28th, and his last on August 7th.

Capt. Bull sends me an interesting note, in addition to the above, of which the following is a translation:—"In West Finmarken Common Rorquals generally come under the coast in the month of July, at the same time that Rudolphi's Rorquals usually leave the coast. This year, on the contrary, the Rudolphi's were under the land right up to the middle of August, and in July the Blue Whales came under the land, while, meantime, the Common Finners only presented themselves to the extent of a couple of individuals." In former seasons Capt. Bull, in his West Finmarken cruising-grounds, only obtained two or three examples of the Blue Whale each year, but between the 8th and 29th July last he captured no less than seventeen of these leviathans. The above he considers as a (further) proof that Blue Whales and Rudolphi's live on the same kind of "kril" (= *Thysanopoda inermis*).

**HUMPBCKS.**—Capt. Horn obtained—Males: March 31st, 42 Norw. ft.; April 2nd, 44 ft. Females: April 3rd, 36 ft.; May 22nd, 28 ft.; June 21st, 45 ft. (containing male foetus 1 ft. 1 in. long); July 15th, 44 ft. (containing female foetus 1 ft. 1 in. long); 27th, 37 ft.; and 31st, 41 ft. (the last whale of the season).



Average, two males, 43 N. ft.; six females, 39 N. ft. This sole return for last season concerning this species gives a somewhat unusual result—namely, that the females were more numerous, and smaller, than the males.\*

BLUE WHALES.—Captain Berg (Syltefjord) obtained the following:—Males: May 10th, 77 Norw. ft.; June 28th, 74 ft.; July 26th, 82 ft.—that is,  $85\frac{1}{2}$  English feet!† Females: June 27th, 78 ft.; July 20th, 75 ft.; August 7th, 69 ft.: average, three males,  $77\frac{2}{3}$  ft.; three females, 74 Norw. ft. Capt. Berntsen (Busse Sund, Vardö) only measured a few examples of the different species, and these only approximately, but records of the present species, males, 78 and 75 ft.; female, 70 Norw. ft. Capt. Horn (Murman coast) obtained as follows:—Males: June, 72, 72, 80 ft.; July, 76, 77, 76 ft. Females: June, 80, 68 ft.; July, 76 (killed 7th, contained male foetus 4 ft. 11 in. long), 68, 77 (killed 10th, contained male foetus 10 ft. 5 in. long), 71, 77, 80 Norw. ft. (much milk, and extremely fat): average, six males,  $75\frac{1}{2}$  ft.; eight females,  $74\frac{1}{2}$  Norw. ft.

COMMON RORQUAL.—Capt. Berg—Males: March 28th, 56 ft., 30th, 61 ft.; April, 72, 67, 64, 56, 66 ft.; May 13th, 58 ft.; July, 62, 62, 58, 61, 66 ft. Females: March 29th,  $68\frac{1}{2}$  ft.; April, 69, 69 ft. (killed on 16th, containing foetus 2 ft. 3 in. long), 59, 63, 64 ft.; May 3rd, 61 ft. (containing foetus 2 ft. 4 in. long.); June 29th, 57 ft.; July, 66 ft. (killed on 6th, containing foetus 1 ft. 8 in. long), 62 ft.: average, thirteen males,  $62\frac{1}{4}$  ft.; ten females,  $63\frac{3}{4}$  Norw. ft. Capt. Berntsen—Males, roughly measured, 70, 66, 67, 67 ft.; females, ditto, 68, 66, 65, 68, 70, 67, 58 ft.: average, four males,  $67\frac{1}{2}$  ft.; seven females, 66 Norw. ft. Capt. Horn—Males: March 30th, 64 ft.; April, 65, 56, 64 ft.; (“Herring-whale” *var.*), 53; 56 ft.; (“Hybrid” *var.*), 68; 58 ft.; (“Hybrid” *var.*), 62 ft.; (ditto), 63 ft.; (ditto), 62 ft.; 61, 65 ft.; May, 58, 61; (“Hybrid” *var.*), 62 ft.; (ditto), 59 ft.; (ditto), 60 ft.; (ditto), 61 ft.; (ditto), 66 ft.; 55, 51, 52 ft. Females: April (“Hybrid” *var.*), 71 ft.; 58 ft.; May (“Hybrid” *var.*), 65 ft. (killed on 2nd, containing male foetus 2 ft. 11 in. long.); (ditto, *var.*), 71 ft.; (ditto), 65 ft.; (ditto), 53 ft.; (ditto), 64 ft.; (ditto), 66 ft.; (ditto), 64 ft.; (ditto),

\* See ‘Zoologist,’ 1887, p. 213.

† For two larger, see Capt. Horn’s list for the year before ‘Zoologist,’ 1887, p. 213.

67 ft.; (ditto), 64 ft.; 56 ft. (killed on 21st—last of the season): average, twenty-three males, 60 ft. 1 in.; twelve females,  $63\frac{2}{3}$  ft. The so-called “hybrids” (=“Bastarder”) average nearly 5 ft. longer than those of the normal type, in spite of the two smallest specimens of this species being included under the former variety.

With respect to the variation in individuals of this species, Capt. Aloff (of the Laurvig Co.) remarks:—“The Common Rorquals captured have varied with respect to colour, build (especially as regards the tail), the size and fashion of the back-fin, but must all be reckoned as included in the common species.” (Translated.)

RUDOLPHI'S RORQUALS. — Capt. Berg killed—Males: June 21st, 44 ft.; July, 41, 45, 45 ft. Females: July 30th, 46 ft. (containing foetus 4 ft. 10 in. long); August 11th, 48 ft. (his last whale of the season): average, four males,  $43\frac{3}{4}$ ; and two females, 47 Norw. ft. Capt. Horn obtained, males, July 5th, 42 and 45 Norw. ft., and a female, on July 9th, 44 ft. Capt. Berntzen measured three males 45 Norw. ft. each; females, 45, 36, 46, 44 ft.: average of the latter,  $42\frac{3}{4}$  Norw. ft.

Prof. Collett (of Christiania), writing to me some time since, called attention to my doubtful identification of Dolphins in ‘The Zoologist,’ 1887, p. 209, as *D. tursio*, which he says is not known to occur so far north. I did not attempt to do more than doubtfully refer them to this species, but they appeared to me to correspond closely to the description and figures of *D. tursio* (especially Prof. Flower’s beautiful figure, Trans. Zool. Soc. xi. pl. i.), and not to *D. delphis*, or any other species of the genus. Prof. Flower (*op. cit.* p. 5) says “it probably has a more northern range than *D. delphis*.”

In last year’s report the loss of the ‘Vardöhus’ was briefly mentioned (this was the ship a cruise in which I described in ‘The Zoologist’ for 1884); further details of this sad catastrophe are as follows:—The ‘Vardöhus’ left Sandefjord about noon on March 22nd, 1887, bound to Finmarken, and had about forty-eight men on board.\* When night fell the wind was blowing fresh from the S.E., and it was very dark, with snow-drifts. About midnight

\* This number includes the “flensers,” &c., who remain ashore during the whaling season, at the factory.

the Oxö light was seen, as supposed, and the course shaped more westerly to pass the 'Ryvingen' at a proper distance; but about 1 a.m. Mathias Andersen, the harpooner, who was on the look-out, had just reported some suspicious breakers to the pilot and captain on the bridge, when the vessel struck on a rock. Mathias immediately ran to the whale-boat, but he found so many men already there, that he turned to the 'Pram' on the other side, cut it down from the davits, and jumped into it, followed by one sailor. The 'Pram' drifted off from the steamer, nearly full of water, and with no oars in it. The two men thought they saw the big boat smash alongside the vessel; very soon afterwards a scream was heard from the crew, the steam-whistle ceased, and the 'Vardöhus' had sunk. Mathias says that all this passed so quickly that he has only an imperfect recollection of the details. With the assistance of the other man he baled the boat with his hat, and tore a piece of board from the 'Pram,' which helped them to keep it clear of the breakers, and eventually they managed to get into smooth water, and about 6 a.m. they landed near Mandal. The pilot was an old and experienced man, and the accident can only be attributed to strong currents, and possibly an error of the compass. The ship was subsequently raised by divers, who found her lying in eight fathoms water, about four miles to the eastward of Ryvingen. Most of the bodies were recovered and buried at Mandal, and a subscription was got up for the widows (about twenty-eight) and the numerous children, who were left in the poorest circumstances.

Referring to the Table on the next page, I have already (p. 201) explained the use of the Roman figures for some of the items; the new names of Managers are in *italics*. The whole yield of oil, judging by the returns now printed, would be nearly 23,500 petroleum-casksful of all qualities; this at 42 gallons to a cask, would give about 987,000 gallons, which is equal to about 3945 tons. Capt. Castberg, in addition, obtained 4100 sacks of guano; the Haabet Co., 3400; and Capt. Bull, 3400. I do not know the amounts at the other guano factories.

## LIST OF WHALES KILLED, 1887.

COMPANY.	MANAGER.	PORT OF REGISTER.	WHALENS.	BLUE WHALES.	COMMON RORQUALS.	RUDOLPH'S RORQUALS.	HUMPBACKS.	TOTAL.	PETROLEUM CASKS OIL, ALL QUALITIES.
<i>Murmanski Coast:—</i>									
Yeretiki .....	P. A. Horn ...	Petersburg...	2	14	35	3	8	60	2100
<i>East Finnmarken:—</i>									
Kobholmjord .....	Fredriksen ...	Sandefjord...	2	2	13	8	2	25	628
Stokke, Pasvig .....	A. Ellevsen ...	Tönsberg ...	2	11	39	6	1	57	1835
Jarfjord .....	Evensen .....	Do. ....	2	3	31	8	1	43	1270
Do., Madvig .....	Do. ....	?	1	2	12	6	1	21	470
Do., Tamassjok .....	C. Bruun .....	Tönsberg ...	1	3	12	5	1	21	470
Busse Sund—Christiania Co.	Chr. Castberg	Christiania...	2	IV	XXXIV	VIII	II	c. 48	1800
Do., Laurvig Co. ....	A. Berntsen ...	Laurvig .....	2	5	20	15	2	42	937
Do., "Thekla" .....	I. Bryde .....	Sandefjord...	1	6	27	6	1	40	1160
Do., Bugten .....	A. Grön .....	Do. ....	1	5	25	5	2	37	1020
Do., "Haabet" ...	Chr. Sörensen	Do. ....	1	—	3	4	—	7	680
Do., Skjersnæs .....	H. Ellevsen ...	Tönsberg ...	2	3	42	10	5	60	1586
Syltefjord, Dahl's Exors. ...	L. Berg .....	Do. ....	1	6	23	6	—	35	1200
Do., Bergen Co. ....	M. A. Selliken	Bergen .....	1	2	6	4	1	13	400
Baadsfjord .....	Foden .....	Arendal .....	1	1	5	9	1	16	300
Mehavn .....	S. Foyn .....	Tönsberg ...	2	IV	XXXIV	VIII	II	48	—
<i>West Finnmarken:—</i>									
Böle, on Sörien .....	Do. ....	Do. ....	2	XII	LIII	XII	II	79	—
Sörvær, do. ....	M. C. Bull .....	Do. ....	2	17	10	110	4	141	2600
Tufjord .....	T. H. Andresen	Do. ....	2	VI	XXVII	VI	I	c. 40	—
Tromsö .....	J. Gjæver .....	Tromsö .....	1	II	XII	VI	I	21	—
			32	108	463	245	38	854	



## THE ART OF TRAINING PIGEONS IN THE EAST.

(Continued from p. 174.)

[In our last number we transcribed the curious remarks on this subject, written by the Sheikh Abul Fazl, the minister and friend of Akbar the Great, in 1590, illustrating the mode of keeping Pigeons in Persia at that date. We now give a translation of the hitherto unpublished commentary on this treatise by Alla-odeen, of Loharoo, one of the best authorities on the subject in India, and written by him at the request of Sir Charles Aitcheson, Lieut.-Governor of the Punjab.]

*Kabutar-bazi*, or, as it is also called, *'Ishqbazi*, signifies the art of playing or gaming with Pigeons, which comprises also their training, breeding, witnessing their play or feats of strength, making them lay their eggs and bring up their young ones, and making them fly in the air for amusement. *Urana* and *Larana* are two different things. The one means simply their soaring high in the air; the other implies their mingling together in the air, and not fighting or wrestling, as it would literally seem to denote. When the birds are taught to fly away and return at command, it is called *Kabutar-bazi*. If they simply take a few turns in the air (which in Hindi is termed *Tawa Karna*), and neither meet nor mingle with their kind, it is simply *Kabutar-bazi*; but if they do so with any other set of Pigeons belonging to some other *Kabutar-baz* in the neighbourhood, it is called *Larai*. They are also taught to leave their *Tah* (or keeper's place), and sally forth in a straight line to a certain distance, as their keeper may desire, returning with a rush when called; and this is called the flying or sallying (*lumbi*) of the Pigeons. If they encounter other Pigeons in the air, and do not mingle with them, but, in order to avoid them, rise a little higher, it is called *Bhagna*. Any number of Pigeons flying together is called *Sath*, and the most excellent flight consists in their sallying forth as near to the ground as possible, nay even so low that their wings almost touch the surface of the earth, while in their return from the goal they must rise high in the air, so as to render the sight admirable. In rushing out they should rise in a group, and, when called, come back direct in a straight line, fluttering all the way in the air. This stately evolution is called *Keza atcha far hai*. Both their egress and ingress should be as graceful as those of a *Tulyer*, especially when rushing in to the *Tah* for grain.

In my opinion it is right that they should fly as near to the ground on their departure, for it enables them to keep their breath the whole way, and not lose wind in returning. If they break down in going out they must necessarily stop short on the way, and fall a victim to hawks or falcons. They return flying high in the air, because it enables them to espy and mark their resting-place from afar, as well as to exhibit their feats to all who look at them. They are also thereby enabled to escape other Pigeons of the neighbourhood, which might screen them from view. One object in making them fly is to display their strength of wing, but in reality the wisdom of this diversion is that flying makes them light-hearted and cheerful, and hence swift in flight. As Nizami says, "A merry bird flies swift." Of all birds whose flesh it is not unlawful to eat, the flesh of the Pigeon is the most palatable. Air makes it easy of digestion. When the flesh loses its density the stomach easily receives it.

Now let us see what kind of *Kabutar-bazi* was that of Akbar the Great. It was, I say, this same *Kabutar-bazi*; but the officious courtiers, in order to prevent criticism, described this diversion of their Emperor's in a coloured garb. Abul Fazl says that the Emperor called his fondness for these birds '*Ishqbazi*'; in other words, '*Ishqbazi*' was the name given by the Emperor to his rearing Pigeons. It may be asked, however, why *Kabutar-bazi* was called '*Ishqbazi*': the answer is that *Ishq* literally means "fondness," and *Ishq Hakiki* signifies a true love of knowing God; hence the Emperor's fondness for Pigeons was distinguished by this lofty epithet, which in a way conveys an idea of his love of God. Abul Fazl says that a story, which to other kings and great men serves only as a lullaby, lays open to Akbar's mind the beauties of imagination. Accordingly, this taste of his for taming Pigeons enables him to entrap even wild birds in the snares of his affection, so that, inspired by the Emperor's affection, these birds learn to love and associate with each other, and become as obedient to men as if they were of the same kind with them. Hence great credit to the Emperor, who rendered animals so sociable.

Abul Fazl says that when Pigeons were flown, and tumbled in the air, Akbar, like a theosophist, used to fall into a state of ecstasy. Theosophists, when in a state of ecstasy, are generally so engrossed with their contemplations, and indifferent to all

worldly manners and customs, as to roll and dance about; and Akbar used to witness the feats of his Pigeons with no other object in view than to derive therefrom the pleasures of theosophy. He considered their turnings in the air in the same light as those of fortune, *i. e.*, their rising and falling in the air, their turning from one side to the other, and other feats of strength reminded him of the revolutions of time and the vicissitudes of life. A Pigeon's wheeling round in the air is called *Tava Karna*, and its turning head over heels is termed *Bazi*, which is an attribute of a Kabuli Pigeon, which, without any aid of instruction, naturally performs a few *Bazi* in the air, and is hence sometimes called Tumbler.\* Abul Fazl says that the Emperor gave his chief attention to this diversion, and these birds have ever since been held in high esteem. The kings of Persia and Turkestan sent many as presents to the Emperor Akbar, and merchants also brought numerous *saths* or lots from distant countries. I say that several kinds hitherto generally known have derived their names from the places they came from, as Basri, Mukhi (vulgarly called Mukhi), Sherazi, Nesapuri (generally called Nisavra). When Nesapur fell into the hands of the Arabs they called it Nesaboor, and the Hindoos corrupted the term into Nesavra.

Abul Fazl says that Akbar took to this diversion when he was very young, and when he grew up in years and understanding he renounced and gave up the pursuit for some time; but when reason dawned he resumed, with ardour and eagerness, his favourite diversion of Pigeon-flying, and, having procured a skilful *Sabz* Pigeon from Khan Azam Kokultash, put him at the head of all Pigeons, and gave him the name of *Mohna*, so highly celebrated in the world. *Sabz* Pigeon evidently means a Pigeon with greenish-coloured feathers, but at the present day it comprises the following kinds, *Sabza*, *Nila*, *Bhura*, *Kheira*, *Bulra*, *Ghagra*, *Nufta*, &c. It would be inaccurate, however, to call *Sabz Jogya* a *Sabya*, for its proper name is *Rangeen*. *Balra Kheira* is also *Sabya*, provided it is not *Tira*, which has some white feathers in the tail. If it has no white feathers in the tail it is surely *Sabya*.

Syad Kokultash Khan, from whom the celebrated Pigeon

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\* The turnings of his Pigeons reminded the Emperor of the ups and downs of fortune, and elicited his praise of the Almighty.

*Mohna* was obtained, was a surdar of high rank in the service of the Emperor. He was murdered by Adham in 970 A. H., and was buried in the marble burial-ground at Nizam-uddin. *Do Khun Shood* is the Persian phrase, from which the year of his death may be derived. His murderer was executed by order of the Emperor. From this *Mohna*, a cock bird, some young ones were obtained, called *Ashki*, *Parizad*, *Almas*, *Shah-Oodi*, &c. These are not the names of colours, but of the young ones, and, since it is not known what sort of hen was the mother of them, it may be concluded that they were of the same kind with *Mohna*, viz., *Sabya*, and were only so called familiarly.

Abul Fazl says that the offspring of these Pigeons became known far and wide throughout the world, and the fame of their strength of wing, their graceful flight, their swiftness, and their being so highly tractable, soon eclipsed the high-flown accounts of Umar Sheikh Mirza's and Sultan Hosen Mirza's Pigeon-flying.\*

The old methods of taming and training Pigeons were no longer in vogue, and the Emperor and his *Kabutar-baz* invented new ones, which were so good that the Pigeon-keepers of Persia and Turan were all astonished, and at last followed and adopted the same plan. From this it appears to me that at that time this diversion was little known in India, otherwise India would have been mentioned along with Iran and Turan. The date of its introduction, development, and perfection was perhaps that of the Emperor Akbar. Abul Fazl states that in former times, both in Iran and Turan, they used to pair cock and hen Pigeons of the same race and colour, and their young ones were of the same kind accordingly; but the Emperor Akbar adopted a new plan, and took young ones from Pigeons of different breeds and colours. A new and handsome breed was thus originated, and the fame of the Emperor's ingenuity soon spread through the world. It is said that when a cock bird is placed with a hen of a different kind, after being kept together for five or six days,

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\* I understand Umar Sheikh Mirza was the son of Sultan Abu Said Mirza, grandson of Sultan Mahomed Mirza, and great-grandson of Meeran Shah, the son of Ameer Taimur Gorkan. He was father of Babir Badshah, and the Ruler of Farghana, in Turkestan. Ameerzada Sultan Hosen, a descendant of Ameer Taimur Gorkan, was the prince who attacked and defeated Sultan Kbalil Mirza at Samarkund after the year 800 A. H.



they become so familiarised that if they are ever separated they easily recognise each other. Abul Fazl says that after being kept together the hen lays her eggs between the eighth and twelfth days, but if young, or sickly, she takes a longer time to lay. In the *Mahr* month they are put together, and in *Farvardin* they are separated.\*

Abul Fazl says that from *Mohna* and his descendants were obtained *Karnama*. This word literally means *records*, but to me it seems to imply that the young ones descended from *Mohna* were the best of their kind, and so true and faithful that wherever they were sent, there they arrived and returned directly. *Mohna* is a Hindi word, meaning to charm or fascinate some one; hence the name of this beautiful pigeon, whose elegant form and good qualities so readily captivated the mind. I am of opinion that a Pigeon of twelve months old is not capable of laying eggs, but one of two years old is generally selected for the purpose. Three years of age is the flower of a Pigeon's life. Young and sickly Pigeons take twenty days before laying eggs [after pairing]; but, as a general rule, no less than a fortnight is required, even though the Pigeons be strong and in good health. In India the birds are paired at the end of *Ausoj*, and separated in *Besakh*. For six months—i. e. from April till August—they live apart; for if they are allowed to live together, the eggs they lay, and the young ones they bring up, are considered weak. Besides this the weather between April and August being hot and rainy, the cock birds, if allowed to remain with the hens, become weak and exhausted. That is also the time of their *cooriez*, which to poor birds is like a disease, and their laying eggs while in ill health is sure to produce weakly young ones.

Abul Fazl says that they lay from one to two eggs at a time; but I say that, by means of certain medicines administered to both sexes, they are made to lay two eggs regularly every time.

Abul Fazl says that the cock bird sits on the eggs in the daytime, and the hen bird at night, to give warmth. I say that this sitting on the eggs is called *seina*, and while thus sitting they never turn sideways; in other words, they keep their neck

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\* *Mahr-mah* corresponds with October and November, the time when winter sets in, called also *Fasl-i-Kharif*, and corresponding with the Hindi months of *Koonar* and *Asoj*. *Farvardin* is the spring season, viz., March and April, or *Bisakh* and *Jeith* of the Hindi calendar.

straight, even when asleep.\* It is now known for certain that the cock bird sits only for five hours on the eggs, while the hen devotes nineteen hours out of the twenty-four to warm and cherish them. If she neglects to sit on the eggs, or fails to impart warmth equally to them, they are sure to be unproductive. If she ceases to sit after five or six days, another hen is engaged, and this substitute is called *daya*, or nurse. When the young ones are hatched the parents do not feed them for want of affection. The nurse feeds them like her own offspring, for Pigeons are not endowed with any discriminative power, and therefore make no distinction between their own and other eggs.

Feeding is called *bharana*, and the Pigeons ceasing to sit on the egg is *zor karana*. A Pigeon leaves its eggs either when it has gone wrong, or when it gets out of time—*i. e.* when the twenty days, or the time for hatching, is past and expired. It is only when there is no hope of hatching that it ceases to tend its eggs.

According to Abul Fazl, twenty or twenty-one days (or three weeks) are generally required for hatching an egg; but if the season be warm, seventeen or eighteen days suffice. I say that the two eggs are never laid in one day, but on alternate days—*i. e.* if one to-day, the second will be laid the day after to-morrow. The same is the case with the young ones. Pigeon-fanciers, however, sometimes remove the first egg, and put it under the Pigeon when the second is laid. This is only done when the young are intended to make their appearance simultaneously. For six days (says Abul Fazl) they are fed on *falah*, but "*falah*" really means *peosi*, or cows' milk for the first four or five days after calving: it is very thick, and the gentry and nobility abstain from it—only the lower classes use it. As Pigeons have no such thing, I do not exactly understand what the Sheikh means. It is, of course, true that the parents give them grain after having softened it in their own crops, and this soft mixture of grain and water may be called *falah*. Feeding their young ones in this way is called in Hindi *bharana*. Three days after they have swallowed the grain, and before it is digested, they bring it up from their crops and give it to their young. This they continue to do for twenty days. Abul Fazl says that, after a month or so, the young

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\* In the case of birds, sleeping is called *bughlana*.

Pigeons are quite able to pick up grain for themselves, and then they are separated from their parents. I say that in India they are separated after forty days, and this separation in Hindi is called *torana*. If the young ones are intended to be brought up under other Pigeons than their own parents, it can only be done before their first feathers begin to sprout, for should the other Pigeons with whom they are placed discover that they are not their own offspring they are sure to kill them. They will only nourish them under delusion, while mistaking them for their own. In forty days the young ones learn to pick up grain for themselves, and have no difficulty in digesting it. In twenty-four hours they are fed thrice—*viz.*, at 6 a.m., at 12 at noon, and lastly at 6 p.m. A young Pigeon can eat an ounce of grain; a flying Pigeon takes one ounce generally, but one intended to lay is allowed two ounces. Those that are used to fly get a full crop only after they have done their work satisfactorily—*i. e.* after they have been flying in the air for a good while. The pairs receive their food three times a-day.

Abul Fazl states that the young Pigeons of the Emperor were delivered to his Pigeon-keepers, who used to make them bathe in earthen vessels, whereby they increased their strength and became familiar with the place. I say that in India they are kept in narrow-mouthed earthen vessels to shelter them from cold, although this is only in winter, and not at any other season.

According to Abul Fazl, when a young one is three months old, and has gained strength and grown familiar with the place, its food is reduced to a third or fourth part of what it used to get, and as soon as it has got used to hunger, it is made to fly gradually till it can fly forty times a-day, and this is called by Akbar, *bhuree*. Flying once in the air and then coming back he calls *hawa*. I say, however, that flying off, taking a turn, and then coming back wheeling round downwards is called *hawa*. Rising from the nest, perching on a wall, coming back at command, and descending at sight of the grain, is called *bharee*, plural *bharyan*. *Tadyana* is a term applied to the movements on the ground of a young Pigeon, or any other bird not quite grown up. Abul Fazl asserts that the flights or feats of a Pigeon at this stage of life are not trustworthy or reliable. I say that the flight of a young Pigeon is not a *parvaz*, but *bharee* or *tawa*—*i. e.* jumping and making a circular

turn in the air, and then coming back immediately, is at the present time termed *tawa*.

Abul Fazl says that a Pigeon has ten flight-feathers, and that when eight of these drop out, the *Kabutarbaz*, or Pigeon-keeper, ceases to let it fly, and this is called *suladena*. I say that the number of primary feathers in each wing is ten, and in the tail twelve. But two kinds of Pigeons have more than twelve feathers in the tail; *Nisavra* has from thirty-two to forty-two tail-feathers, and *Khal Vilaite*—a very beautiful little Pigeon brought from Persia and Asiatic Turkey—has from sixteen to thirty-two. The colour of a *Kbal* is either yellow, black, red, *kasni*, green or *amiri*—the last colour being a mixture of *kasni* and green. If a *Kbal* has only ten feathers in the tail it is undoubtedly a mongrel. *Shirazi* and *Mukhi* have the same number of feathers as the Indian Pigeons, of which *Laka* is the only kind that has from twenty-four to forty-two. A *Laka* having less than twenty-four is considered degenerate, one or other of the parents being a *Nisavra*. A *Laka* of coloured kind and black, *kasni-sabz*, are very scarce. White *Laka* may be found everywhere. A *Laka* is famous for its strutting movements. It stalks like a champion.

Abul Fazl says that when eight of the ten flight-feathers are moulted the Pigeons are stopped from flying. I say that these ten feathers enable them to fly, and are hence called *shahpur*. They are prevented from flying because otherwise the remaining two feathers will bleed, and become weak through overwork. In Akbar's time [the moult] was called *suladeena*, but now-a-days is called *bithava* and *kureez*, which begins in June and lasts till November. In the summer season the Pigeons are free—i. e. they neither let them fly nor make them exercise any feats at all. From May to October they are kept in *koreez*, and from February to April the two large *shahpurs*, called also *kundi-ki-par*, make their appearance. The young Pigeons are taught to fly in the summer, but from July to October they have again to remain in *koreez*, and will only come out with the big ones. Abul Fazl says that within two months they get new feathers and a good deal of strength and renew their flights, and their skilfulness at what is termed *bazi*. As soon as they have learned how to wheel round in the air and perform other feats they are brought before the Emperor; but for the development of these attainments we have to wait four months more. When the Pigeons fly with eagerness,



and return with a flutter it is called *churkh*, but if the evolution is not performed well enough it is called *kataf*, and not *churkh*, and is consequently not reliable. I say that now-a-days *kataf* is called *perch* and *bal warva*, and it is *bazi* when a Pigeon hovers in the air.

The Sheikh (*i. e.* Abul Fazl) says that on one occasion many were of opinion that the Pigeon had made two turns or *bal*, while some of the beholders said that it had remained still in the air. The Emperor thereupon ordered one of its wings to be stained with ink; and when this was done the wing with the black spot appeared to turn. The Sheikh states that sometimes a Pigeon, while turning and revolving in the air, becomes delirious and falls to the ground, and this falling is called *galola*, and is considered a defect or infirmity. I say that the Pigeon which performs a *bazi* high in the air and turns round is *asil*, or well-born, and the *bazi* is called *tund*, which is also a fault. In India the remedy for this is to have the feathers pruned and the bird put into *kureez* (moult); and after this ordeal the bird, through God's omnipotence, will turn out an excellent one, with every accomplishment, flying high and gracefully, making good turns in the air, and performing various feats. The excellence of its flight and skill consists in its making a clear turn in the air, producing a distinct sound with its wings beating against the wind, and not falling to the ground.

The Sheikh says that sometimes a Pigeon, in the midst of its *churkhs*, descends downwards through fear, but soon, recovering its senses ere it touches the ground, again rises in the air. I say that sometimes a Pigeon, in imaginary fear of some bird of prey, like the Lughur or Jughur falcons, Bahri (Peregrine), or Ukab (Eagle), descends downwards to save itself, but discovering its mistake, and that it was only a Kite or some other harmless bird, it immediately stops short, and, ere it reaches the ground, turns back into the air and resumes its flight.

According to Abul Fazl, some of the Emperor's Pigeons were so clever that they used to make fifteen *churkhs* and seventy *bazi*, to the great astonishment of the lookers-on. This is certainly correct. A strong and well-born *Vilaiti* Pigeon in India can perform fifteen *churkhs* in a fixed and limited circuit in the air; but as regards seventy *bazi*, I do not think any kind of Pigeon at the present day can perform so many, the reason perhaps being that the *Kabutar-baz*, or Pigeon-keeper, in India is not acquainted

with the strong medicines and food which those of Persia and Turkestan make use of. This may also be accounted for by the fact that either the Pigeons of the ancient noble race are no longer procurable, or that the climate of this country does not suit them. Abul Fazl says that in ancient times a lot of Pigeons, called a *sath* or *tukri*, consisted only of eleven or twenty-one Pigeons, and that in Akbar's time it consisted of 101 Pigeons. At the present day, however, a *sath* of only eleven or twenty-one Pigeons is absurd and contemptible. Now-a-days a *sath* has no fewer than fifty or one hundred. If the number is less than that it is called a *tukri*, and not *sath*. The native gentry and other *Kabutar-baz* of Delhi and Lucknow have from 100 to 150 in a *sath* designed for *bhagna* work only, and this is the largest number of Pigeons that can safely be kept and flown together without fear of dispersal in the air. But a *sath* intended for *larai*—i. e. for meeting and mingling with other Pigeons—may consist of from 150 to 200. These, however, keep close to the ground, and do not fly to any distance; they only fly over and around their *tah* and their keeper's place. Any increase above 150 in a *bhag* flock would result in many being dispersed and perhaps lost. Similarly, in a *larai-ka-sath*, if there are more than 200 birds, many of them are sure to get confused, and would probably lag behind and perch upon the walls and minarets of the neighbouring buildings.

Abul Fazl says that the Emperor's Pigeons fly and make *bazi* at night also. I say that the Pigeons that can fly at night are *Kabuleez* [i. e. from Kabul] and *Vilaiti*, which are by far the most sharp-sighted, high-flying, and strong-winged. In the time of the late Akbar Shah II., and also in that of Budadur Shah, the last King of Delhi, a *Kabutar-baz* of Lucknow had a *sath* of nearly 100 Pigeons. Another flock belonging to a certain Eunveh, the Nazir Mahal, named Munzoor Ali Khan, sallied from their *tah*, and proceeding as far as Agsveri Gate, nearly a quarter of a mile from their place, made a *fava* there, and the Pigeons of Meer Baba Ali (a *Kabutar-baz* of Delhi in the service of the King) encountered them there, intercepted their progress, and brought back seven of the Eunveh's Pigeons with them to their keeper's place. This is called *Kabutar-ka-Warlena*. To entice another man's Pigeons to his *tah* in company with his own birds is considered a great credit to a *Kabutar-baz*.

The Pigeons that fly at night have little bells fastened round their feet or ankles. These bells are called *khalkhae*, and have small shot within them to give a jingling sound and indicate the whereabouts of the Pigeon in the air at night, for otherwise the *Kabutar-baz* and the spectators can hardly distinguish in what direction the Pigeon has flown. These pigeon-bells are either of gold, silver, brass, or *morassakar*—i.e. set with jewels.

(To be continued.)

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#### ADDITIONS TO THE LIST OF SOMERSETSHIRE BIRDS.

BY THE REV. M. A. MATHEW, M.A.

THE Supplemental List to his 'Birds of Somerset,' sent by Mr. Cecil Smith to the last number of 'The Zoologist,' does not yet include all those species whose capture within the limits of his county has from time to time been recorded. On referring to my notes I am able to add the following ten birds, which will bring the number obtained in Somerset up to 246, counting those which Mr. Smith has already mentioned:—

1. Snowy Owl, *Surnia nyctea*. A very beautiful adult example was trapped on Exmoor in March, 1876, as recorded by me in 'The Zoologist' for 1876, p. 4900.

2. Twite, *Linota flavirostris*. Seen by me several times on sandhills near Weston-super-Mare.

3. Bee-eater, *Merops apiaster*. One obtained many years ago near Bridgwater was in the collection of Mr. Straddling, of Chilton Polden (Zool. 1881, p. 309).

4. Purple Gallinule, *Porphyrio hyacinthinus*. Although the authorities refuse this bird a place in the British list, it has occurred so often in a wild state in all parts of the kingdom as to preclude the idea that all must have been escaped birds, and is as much entitled to be called "British" as any I am now setting down. A very fine example, showing no signs of having been in confinement, was caught by a sheep-dog in a ditch on the farm of Mr. James Burrows of Badgworth, as recorded by me in 'The Zoologist' for 1879, p. 128.

5. Little Crake, *Porzana parva*. Mr. Straddling's collection contained an adult male, which was obtained near Bridgwater (Zool. 1879, p. 128).

6. Collared Pratincole, *Glareola pratincola*. One shot on the Mendip, not far from Weston-super-Mare, was in Mr. Straddling's collection. This bird is now in the possession of Mr. Henry Mathias, of Haverfordwest, in whose house I have seen it. *Vide* 'Yarrell' (4th ed.), vol. iii., p. 234, and Zool. 1881, p. 309.

7. Cream-coloured Courser, *Cursorius gallicus*. In his 'List of the Birds of Devon,' Mr. Brooking Rowe mentions one which had been shot in Somerset, but does not, I believe, give any particulars (Harting's 'Handbook,' p. 133).

8. Black-winged Stilt, *Himantopus candidus*. One, now in the possession of Mr. Henry Mathias of Haverfordwest, was shot near Bridgwater, and was for some time in Mr. Straddling's collection. I remember hearing of this bird so long ago as 1858, from Mr. Wm. Brodrick, at that time residing at Ilfracombe (Zool. 1881, p. 309).

9. Bartram's Sandpiper, *Bartramia longicauda*. A specimen of this American Sandpiper, the earliest, perhaps, obtained in this country, was for a long time unrecognised in the collection of Dr. Woodford, of Taunton, until identified by me. It is now in the county collection of birds at Taunton Castle; it is in almost complete winter dress, and was shot on the bank of the River Parret, now nearly fifty years ago. Recorded by me in 'The Zoologist' for 1877, p. 389. See also 'Yarrell' (4th ed.), vol. iii., p. 441.

10. Night Heron, *Nycticorax griseus*. Mr. Straddling's collection contained one shot near Bridgwater.

The Somerset Rose Pastor shot in the garden of Laverton Rectory, near Frome, is now in my collection. I have notes of another obtained near Axbridge. Sanderlings I have often seen on the sands near Weston-super-Mare.

A complete account of the birds of Somerset, a most interesting county, and most diversified in its physical geography, is still a desideratum. At the time when Mr. Cecil Smith published his useful book he appears to have had little, if any, information respecting the most important districts of his county, *viz.*, the wide expanse of Exmoor Forest to the north-west; the great central turf-moors; and the Mendip plateau to the east. It was a great loss to his work that he possessed no correspondents in these parts of Somerset. The peat-moors in summer time, with their wild growth of sedge and grasses,



suggest great possibilities in the way of aquatic warblers and rallidæ; and the high ground of the Mendip, offering a tempting resting-place for passing migratory birds, must often have been visited by rare and unrecorded species. The Norfolk Plover frequently occurs there, the Mendip being at no great distance from those districts in Wilts where it is still a regular summer migrant.

Since writing the above I have come across the notice of a Woodchat Shrike, *Lanius rutilus*, in the Rev. A. C. Smith's 'Birds of Wilts,' p. 123, which he states is in his collection, and "was killed in the county of Somerset, within a short distance of Bristol."

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## NOTES AND QUERIES.

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### MAMMALIA.

**Wolves nurturing Children.**—I have been much interested by your reprint, in the March number of 'The Zoologist,' of the late General Sir William Sleeman's pamphlet on "Wolves nurturing Children in their Dens." Having myself seen the lad first mentioned in the narrative, and as I think there are those still alive who could endorse what is therein stated about the boy, I take the liberty of addressing you, in the hope that this corroboration may still be procurable through your agency. When I saw this Wolf-nurtured lad I was myself a child, living with my father, the late Colonel Robert Traup, who then commanded the 2nd Oudh Local Infantry Regiment, at Sultanpur, Oudh, and, if my memory serves me aright, the boy was then in the charge of either Major A. P. Orr or Major Douglas Bunbury, both of the King of Oudh's service; I think in that of the former. Major A. P. Orr is still living in London (somewhere about Kensington or Norwood, I think), and Major Douglas Bunbury at Inverness, N.B. Messrs. King & Co., or some of the other India Agents, perhaps know the correct addresses.—NORMAN E. TRAUPE (Mulla-Kuttyoor Tea Estate, "Lockington," Kuttyoor, Kumaon, N.W.P., India).

**Otters and Polecats in Suffolk.**—Referring to Mr. Rope's note under this heading (p. 183), I am afraid he will deem me a very old fogey if I refer him to 'The Zoologist' for 1849, for a note by me on the common occurrence of the Polecat in my old home in those days. Then not a year passed without several being killed, especially in the autumn, when they made their way up from the fen to the high land. True, my notes did not exactly refer to Suffolk, but the parish was only separated from that county



by the Waveney. They had a curious custom of coming every year by the same road, and a trap, unbaited, set in a run under the roots of a certain old oak generally caught one or two each autumn. I remember on one occasion helping to slaughter seven in a barn—two old ones and five nearly full-grown young ones. In fact, they were then and there most annoyingly plentiful. Matters are much altered now; they are not extinct, but decidedly rare. From Roydon and Bressingham, where I knew them formerly, I hear that one is never seen now. The gamekeeper nearest to me says they have killed three or four during the last ten years, but adds that when his father, some twenty years ago, was keeper at Saham in central Norfolk, they used to get a dozen or more every year. I have seen their tracks in the snow not many years ago, and now I hear that there was one this winter within two hundred yards of my house, and this is pretty nearly all I can hear of them. Scarce but not extinct. They are very easy to trap, and make themselves most obnoxious wherever they are, clearing off whole broods of turkeys or emptying a dovecote, so farmers as well as gamekeepers are in arms against them, and will soon exterminate them. I have just learnt from my daughter (May 11th) that a few days ago she saw the bodies of two Polecats on the keeper's gallows at Woodrising, in central Norfolk. As to Otters, I think they are about as common as they used to be—that is, much commoner than is supposed. They are nocturnal, and seldom seen, nor, except where Trout are preserved, is it anybody's business to disturb them, and not one person in a hundred knows an Otter's "seal" when they see it. Then they have all the marshes and wet carrs as breeding-grounds. They are notoriously difficult to hold in a trap, yet I remember a case in which one was caught in a small steel-fall by the tips of the toes, close to the alder-root where he had his holt, and was content to go in, trap and all, and wait till the keeper came, when a very slight pull would have freed him.—H. T. FRERE (Burstons Rectory, Diss).

**The Whiskered Bat in Cheshire.**—In your article on the Whiskered Bat, in 'The Zoologist' for May, you mention (p. 164) a specimen found asleep on a wall at Fernilee, near Whaley Bridge. Mr. C. Oldham, the finder of this specimen, caught another near Fernilee on April 26th, 1886. It was flying about at midday, and he managed to knock it down with his hat. On January 7th, 1888, Mr. Oldham and myself visited the disused copper-mines at Alderley Edge, and found two Whiskered Bats hanging from the roof of the workings. The walls and tops of the tunnels were covered with small flies, together with a number of moths, principally *Scotosia dubitata*. We again visited the mines on March 10th, but could find no bats in the tunnels we had tried before; but on examining one, the entrance to which was almost blocked up, we found one Whiskered and one Long-eared Bat. All were 100 yards or more from the mouth of the tunnels. When first

handled the Whiskered Bat uttered a sharp cry, but the Long-eared Bat was quite silent, and seemed very sleepy until let loose in a room, when they all flew about for fifteen or twenty minutes, finally settling on the cornice. None of them would touch food, though we kept them alive for two or three days. Hoping this information may be of some use to you, I beg leave to correct a printer's error in the name "Fernilee," which is spelt without the *i* on the page above referred to.—T. A. COWARD (Higher Downs, Bowdon, Cheshire).

**Hesperomys versus Mus.**—When I returned to West Cliff, Custer Co., Colorado, last autumn, after an expedition to other parts of the State, I found my house swarming with a species of Mouse, *Hesperomys sonoriensis*, LeConte, which is conspicuous for its somewhat yellowish colour and white feet. During the winter, however, specimens of *Mus musculus* appeared, became more numerous, and finally took the place of the *Hesperomys*, which became extremely rare. It was evidently a case like that of *Mus decumanus* and *rattus*, so familiar to everyone, though it is not very easy to conjecture the precise reason that the presence of the *Mus* should be the cause of the extinction of the *Hesperomys*. Later on, I procured a cat, which has proved fitter than *M. musculus*, and has survived at its expense—but that is easier to understand. Dr. C. Hart Merriam, of the U.S. Department of Agriculture, to whom I submitted the *Hesperomys* for identification, states that it is *sonoriensis* as the nomenclature now stands, but suggests that the name may have to be altered when a revision of the group is undertaken.—T. D. A. COCKERELL (West Cliff, Custer Co., Colorado, U.S.A., April 23rd).

#### BIRDS.

**The late Mr. J. P. Wilmot's Egg Collection.**—The collection of British Birds' Eggs formed by the late Mr. Joseph Pratt Wilmot, and by him bequeathed to his friend the late Mr. G. L. Russell, has lately been presented to the University of Cambridge by Lady Caroline Russell and Mr. Cecil Henry Russell, in memory of the husband of the one and the father of the other. The collection is accompanied by many letters, from correspondents of Mr. Wilmot, and other papers, which will materially aid the compilation of a Catalogue of its contents; but, for the better understanding of these documents, an examination of Mr. Wilmot's own letters is much desired. Accordingly I would ask any one who is in possession of such letters to be so good as to submit them to me. I will promise that they shall be duly returned to the senders. It will be remembered that a considerable proportion of the eggs figured by Mr. Hewitson, especially in the last edition of his well-known work, were drawn from specimens in his friend Mr. Wilmot's collection.—ALFRED NEWTON (Magdalene College, Cambridge, May 8th).



**Moult of the Facial Feathers in the Rook.**—Mr. E. T. Booth is, I believe, the latest authority who has directed attention to this subject, and, in his 'Rough Notes on British Birds,' vol. i. (Rook), he expresses his opinion that the statement that young Rooks lose the feathers over the base of the beak at the first moult can scarcely be correct, or that there must be not infrequent exceptions. The results of repeated experiments with birds reared from the nest, and of his observation of wild birds, are given as reasons for coming to this conclusion. The following facts support Mr. Booth's views. In a tame male Rook, reared in 1885, a bare patch on the chin and upper portion of the throat appeared at the first autumn moult, the upper mandible being completely covered until the autumn of 1886, when all but two or three bristles disappeared; in the spring of 1887 the facial aspect of this bird differed in no respect from that of adult wild Rooks. Since he was able to fly the freedom of this bird has been complete, while the abundance of food he has enjoyed would probably rather have advanced than retarded maturity. On March 30th last my brother observed near here a small flock of twelve black-faced Rooks, several of which he heard "caw." April 1st last, fifteen Rooks with black beaks seen by myself in the same locality, and successfully stalked. These birds, into whose midst I almost walked, might, but for their cries of alarm, have been mistaken for gregarious Crows, as they flew off turning their heads from side to side, as is the manner of Rooks when thoroughly frightened. April 7th last, eleven black-beaked Rooks (with one bare-beaked bird) observed by me through binoculars, and April 26th fifteen or so, both flocks being seen in the same district. Thus there is, or was, a small flock of fifteen Rooks near here whose plumage is immature, and which probably are not breeding-birds. On April 2nd last, a black-beaked Rook was seen by me, feeding on the lawn here with other bare-beaked birds belonging to our home rookery; this or another similar bird has been repeatedly seen by my brother carrying sticks and endeavouring to build, but, so far as we know, unsuccessfully. Lastly, on April 20th, a poisoned Rook was brought to me which had the upper mandible completely feathered, but the lower mandible and skin beneath, with the upper throat and lower part of the lores, bare or nearly so. I have preserved the head of this bird. On dissection it proved to be a male, with testes about the size of Linnets' eggs; but its plumage lacked the bright blue tinge of the adult Rook, and its stomach was gorged with food, which is also against its having been a breeding-bird. Even admitting that the Rooks mentioned above were late-hatched birds of last year, it seems evident that there must be many exceptions to the generally-accepted statement as to the moult of the Rook's facial feathers. Figures, relatively so small as those given by Mr. Booth, by Mr. Stevenson ('Birds of Norfolk,' i. 275), and above, are easily under-estimated, for it should not be overlooked that, in this country,

the great majority of young Rooks are shot soon after they are fledged, while those that escape the ordeal of Rook-shooting naturally fall the easiest victims to farmers who are solicitous for the welfare of their potato- and root-crops. Further, Rooks, except in the nesting-time, are shy and difficult to watch, and the blackness of the beak is so small a characteristic that it may fairly be urged that where one black-faced Rook is seen between January and the end of April, very many escape observation.—C. R. GAWEN (Chetwynd Park, Newport, Salop).

**Nightingale in London.**—Passing through the Green Park, on May 5th, about 2 p.m., with a friend we heard a Nightingale singing away beautifully, in the garden in front of Sydney House, in the thick bushes. I do not know if it is a common occurrence, so send this communication for what it may be worth.—J. C. PRIESTLEY (17, Hertford Street, W.).

**Tame Duck preying on Trout.**—I was standing on a bridge across a brook watching two tame Ducks, just below a small fall, eagerly gazing down into the water and occasionally diving; at last one stayed longer under water than usual, appearing to struggle for something at the bottom, and came up with the head and appendant viscera of a Trout, which could not have belonged to a fish of less than six or seven inches. The head was so large that the Duck could not swallow it, and after it had been trying to do so for five minutes I went away. The body of the fish must have remained under its stone of refuge. Ducks are destructive to spawn, but I never heard of their hunting fish before, and should like to know your experience, or that of your readers on the subject.—E. L. MITFORD (Henfaes, Dolgelly).

**Birds at the Galloper Light-vessel.**—The Galloper light-vessel is a good post of observation. Mr. Thomas Sorrell, formerly in the Trinity Service, and a practical naturalist, says that on one occasion, in the month of November, when the tide of migration was still running strong, the master sent him about seventy Golden-crested Wrens tied together on a string, from which he selected five Firecrests, three of which he still has, and about the identity of which there can be no doubt. Many common birds also fly against this light, and though I have never had anything rarer than a Shore Lark, no doubt good things often occur. I have received sixty-five species of birds, or their wings, from floating-lights and light-houses—a number which might be easily augmented.—J. H. GURNEY, jun. (Keswick Hall, Norwich).

**Firecrest and Grey-headed Wagtail at Brighton.**—A male Firecrest, *Regulus ignicapillus*, was caught here on April 4th, whilst fluttering against the window of a grocer's shop. The shop is in North Street, one of the most crowded thoroughfares of this town. A Grey-headed Wagtail,

*Motacilla flava*, a brightly coloured male, was also caught here, on the Downs, on April 20th. Both have been preserved, and are now in my possession.—F. H. BARCLAY (Brighton).

**Bee-eater in Co. Cork.**—I received the other day a specimen of the Bee-eater, *Merops apiaster*, L., for our collection of Irish birds. It was shot at Whitegate, Co. Cork, during the first week of May. This bird is a very rare visitor to Ireland, having only occurred here about half-a-dozen times.—ROBERT F. SCHARF (Science and Art Museum, Dublin).

**Hoopoe and Turtle Dove in Co. Waterford.**—Some of the immigrant Hoopoes observed in England have found their way over here. On the 15th April one was shot at Seaview, on the coast of this county, and sent to me. I have presented it to the Science and Art Museum, Dublin. Another Hoopoe (evidently the mate of the preceding) has frequently been seen about Seaview and along the neighbouring cliff-tops since. I have requested that it may not be shot. I had previously received the wing of a Hoopoe which had been killed by a cat, close to Seaview, in February or the beginning of March, 1886. The species is a rare visitant to Waterford, Cork, and Kerry. I know of some occurrences in each of these counties. Smith records a Hoopoe killed in Co. Waterford "during the great frost of 1739." The Turtle Dove, which is rare in Ireland, has in several years been observed at Seaview.—R. J. USSHER (Cappagh, Co. Waterford).

**Starling mimicking other Birds' Notes.**—On May 5th, while resting after climbing to a Kestrel's nest, I heard, as I thought, the note of a Kestrel just behind me, but on turning round I saw that the note was produced by a Starling. The bird then began whistling the ordinary notes of its own species, but soon these were changed for the twitter of the Swallow, then for the call of the Partridge. The reproduction of the different birds' notes was perfect. The Starling was close to me the whole time, so that I could easily see that it was the author. I have many times noticed a Starling imitate the notes of one single other species, but never before heard it "take off" so many birds in such quick succession.—E. W. H. BLAGG (Cheadle, Staffordshire).

**Magpies attacking a weakly Donkey.**—The incident described on p. 184 certainly does not strike me as being "well authenticated." The donkey, when found dead, had one wound, and one wound only, according to the account given. Now this "old donkey" must have been very different from all other donkeys, if, when he found a hole being made in his spine,—a very painful process one would imagine,—he did not roll on his back or in some other way get rid of the Magpies. It seems incredible that he should allow them to go on pecking *at the same place* till they had killed him. If the donkey had been found to have been wounded in *several* places, the case would have been a stronger one against the Magpies. But

the most reasonable explanation seems to be that the "old" donkey turned out in the snow with a sore back, died a natural death, starvation perhaps hastening its end; and then, but not till then, the Magpies fed upon him, finding the sore on his back the tenderest part to begin upon. The Magpie is certainly a great pilferer, but as nobody actually saw these Magpies kill the donkey, it seems drawing on the imagination a little too far to suppose that they were really guilty of his murder. — E. W. H. BLAGG (Cheadle, Staffordshire).

**Ornithological Notes from Dorsetshire.** — A Hoopoe was shot on April 17th, at Crouch Grange, by the Rev. N. Bond's keeper, who mistook it for a Jay. A boy picked it up soon after with a broken wing, and brought it home, hoping with careful attention to keep it alive, which is possible for a time at least, if it is supplied with suitable food—grubs, worms, beetles, &c. It is not a dainty feeder. It is a pity so handsome and attractive a bird as the Jay should be so hardly dealt with by keepers generally for the occasional theft of an egg, which is only its exceptional food, and to which the whole family of *Corvidæ* is addicted. An adult female Common Buzzard was brought to me for identification on May 1st. It had been killed the previous day in the neighbourhood of Winterton Kingston. A Black-throated Diver was picked up on March 20th, at Wortland, in the Vale of Blackmore, seventeen miles inland, by Mr. Montague Williams Gardner, who, hearing something fall heavily near his house, went out and found the bird lying in a helpless state. He brought it in and gave it every care, but for want of proper food and, besides being probably wounded, it died on the 22nd. About the same time a Gannet found its way to Stourton Candler, also in the Vale of Blackmore, but six miles further inland. The bird was found by Mr. Rice, of New Leog Farm, in one of his fields. Though unable to fly, it had sufficient strength and courage to attack and firmly take hold of his leg. Mr. Rice tells me it was wounded in the legs and feet. Its death-flight must have been a long one. A Pied Flycatcher is now frequenting the Rectory Garden of Corfe Castle, where one was seen some years ago, but was unfortunately killed. This one being alone, there is no chance of our hearing of a brood at Corfe, unless it is accompanied, as in the last instance, by a mate. It is to be hoped this may be the case, and that it has escaped the vigilant eye of Mr. Eustace Barker, to whom I am indebted for the notice of the visit of this rare little bird. — J. C. MANSEL-PLEYDELL (Whatcombe).

**Reported Occurrence of the Lesser White-fronted Goose in Somersetshire.** — With reference to the statement which appeared in the Report of the Proceedings of the Linnean Society on April 5th (p. 195), Mr. F. Crisp, Treasurer to the Society, has received the following communication, which he has forwarded for publication:—"I have great pleasure in sending



you the remains of the Wild Goose shot near here, for inspection at the next meeting of the Linnean Society. I am sorry that I have only the parts enclosed herewith. The particulars of the bird's taking are as follows:—It was seen feeding in some meadows at about two miles from this town, near the village of West Buckland. A farmer either disturbed it, or shot at it, I am not sure which, when it rose and flew away for a mile or so, afterwards returning to the same meadow, where it was then shot by the same farmer's son. This occurred at about the middle of January last, and it was not until a week or ten days afterwards that I heard of the occurrence, and on visiting the farmer found that the bird had been eaten, the parts now preserved being all that remained. These parts I sent to Mr. Cecil Smith, of Lydeard House, near Taunton, and he expressed his opinion in a letter to me that the bird was a specimen of the Lesser White-fronted Goose, in its first year.”—W. GYNGELL (14, Fare Street, Wellington, Somerset).

**Lesser White-fronted Goose in Somersetshire.**—As I am responsible for naming the Goose exhibited by Mr. Crisp at the meeting of the Linnean Society on the 5th of April last (referred to on pp. 176, 195), I should like to give as shortly as possible my reasons for so naming the bird. The very small size of the parts sent as compared with the same parts of any other of our wild Grey Geese struck me immediately. Though evidently, from the small extent of white on the forehead, an immature bird, the small size could not be attributed to immaturity; as the bird was shot in January, it would by that time have fully attained the size of an adult. The next point was the shape of the head, the forehead and the ridge of the bill being in the same line (*cf.* Yarrell, ed. 4, vol. iv. p. 263: “Its small size, short straight-ridged bill forming a line with the forehead, on which the white extends beyond the line of the eye”). This certainly applies to the present specimen, for though an immature bird, the position of the white is clearly to be traced on the forehead, and extends directly over the centre of the eye. The bill measures  $1\frac{2}{16}$  in., as against  $2\frac{1}{4}$  in. in *Anser albifrons*; tarsus  $2\frac{1}{4}$  in., as against 2.65 in., not very far from  $2\frac{3}{4}$  in. in *Anser albifrons*; wing from the carpal joint to the end of the second quill, which is rather the longest, 16 in., as against 17 in. in *A. albifrons*. It is of course useless to compare it with *A. segetum* or *A. brachyrhynchus*: the white on the forehead and the colour of the nail of the bill immediately distinguish it from these two, although both of these occasionally show a narrow streak of white over the bill in the winter, but by no means to such an extent as either of the two White-fronted Geese, in both of which, of course, the white is constant. *Anser cinereus* being considerably the largest of all the British Grey Geese, it is unnecessary to compare the measurements of the remains in question with that bird. Of course it is not so easy to judge, from the fragments sent, between two somewhat similar species, as it would have been had the entire skin been sent; but it certainly seems to me, in spite of what was said at

the meeting of the Linnean Society, that the head and bill are in this case sufficient to enable one to form a satisfactory opinion, and that anyone comparing them with the same parts of *A. albifrons* or any of our other wild Grey Geese could scarcely be in doubt as to the species. Since the meeting of the Linnean Society, Mr. Gyngell has again sent the remains to me, and they are now before me, as also are specimens of our other wild Grey Geese, and I see no reason to alter my opinion. As to the matter of escape, that is another question, and I should be glad of further evidence on that point from Mr. Gyngell and the person who shot the bird.—CECIL SMITH (Bishop's Lydeard, Taunton).

**White Wagtail in Norfolk.**—Two male specimens of *Motacilla alba* were obtained near the Golf-ground, Great Yarmouth, on April 24th. At the date of publication of the 4th edition of Yarrell's 'British Birds,' and the new 'List of Norfolk Birds,' by Messrs. J. H. Gurney and T. Southwell (Trans. Norf. & Norwich Nat. Soc.), this species had not been obtained in Norfolk; but, attending a meeting of the above Society to exhibit my specimen on April 24th, it was stated by the President, Mr. J. H. Gurney, that one had since been obtained by Lord Walsingham at Merton.—GEORGE SMITH (Great Yarmouth).

**Pied Flycatcher at Harrogate.**—On May 4th, while rambling through Birk Crag, a well-wooded glen about half-a-mile long by a quarter broad, I was fortunate in seeing no less than five pairs of Pied Flycatchers. They seemed, from their actions, to have settled down in the locality, but probably they were new arrivals, as it was about 5 a.m. when I saw them. There were no less than three pairs together in one little corner. The neighbourhood is pretty well scoured by birds'-nesting youngsters, so I am afraid they will not be left in peace. This bird is very irregular in its occurrence here; in 1886 it was fairly plentiful; last year, although I searched diligently, I could not find a single nest, though I heard of one which had been taken by a school-boy; it was built in a bridge over the Oak Beck, at the end of Birk Crag.—RILEY FORTUNE (Harrogate).

**Pied Flycatcher in Glamorganshire.**—On May 8th, in the grounds adjoining this house, I obtained a male specimen of the Pied Flycatcher (*Muscicapa atricapilla*). This is, to my knowledge, the only authentic occurrence of this Flycatcher in Glamorgan. Mr. L. W. Dillwyn, in his 'Fauna and Flora of Swansea' (1848), states that this species "is said in the 'Swansea Guide' to inhabit the neighbourhood"; but he adds, "I much doubt whether it has been seen for at least forty years." On such unsatisfactory evidence, I was loth to (and did not) include it in my List of Glamorganshire Birds, until the occurrence of this specimen places its claim to be included beyond doubt. While writing on this bird, may I point out by way of correction to Mr. Seebohm's statement ('British Birds,'

vol. i., p. 328) that the Pied Flycatcher "has never been recorded from Ireland," that an adult female was shot in County Mayo, by Mr. R. Warren, in April, 1875, and will be found recorded in 'The Zoologist' for 1875, p. 4498.—DIGBY S. W. NICHOLL (The Ham, Cowbridge, Glamorganshire).

**Hawfinch near Harrogate.**—Last year I had a note upon this bird in 'The Zoologist.' Since that appeared, I have discovered that it is much more plentiful than I supposed it to be. Following I give the names of no less than eleven places in the neighbourhood where it occurs regularly. I have no compunction in doing so, because the places where it nests are strictly preserved. The localities are all within eight miles from Harrogate, viz., Studley (the estate of the Marquis of Ripon), Ripley Park, Rudding Park, Pannal, Bishop Thornton, near Brimham, Knaresboro' (two places), Ribston, Staveley, and Boston Spa. In 1885 this bird nested at Axwell Park, near Newcastle-on-Tyne, a place which it frequents regularly.—RILEY FORTUNE (Harrogate).

**Bulwer's Petrel.**—The following remarks by Prof. Newton, recently published in the 'Proceedings of the Zoological Society,' and relating to a specimen of this bird found in Yorkshire, will be read with interest by every ornithologist. On exhibiting the specimen in question, on Nov. 15, 1887, Prof. Newton said:—"Some doubt having, it seems, been expressed as to the occurrence of Bulwer's Petrel in this country, which was announced by Gould in the concluding part of his 'Birds of Europe,' published on the 1st of August, 1837, Mr. William Eagle Clarke, Curator of the Museum of the Philosophical and Literary Society at Leeds, determined to investigate the facts; and as his search for the specimen in question has been successful, I have great pleasure in exhibiting it, on his behalf. I have the greater pleasure in doing this as, but for his perseverance and that of a local naturalist, Mr. James Carter, of Burton House, Masham, the specimen would probably have been for ever lost sight of, whereas we may now hope that it will find a permanently safe abode. Gould's statement was that the specimen having been found dead on the banks of the Ure, near Tanfield, in Yorkshire, on the 8th of May, 1837, was brought to Captain Dalton, of Slenningford, near Ripon, a gentleman, as I learn, who had succeeded to a collection of stuffed birds begun by his father. The father was Colonel Dalton, who, curiously enough, had sent Bewick the specimen of the Common Stormy Petrel (also found dead in that neighbourhood) from which the figure and description in his well-known work was taken (British Birds, ed. 1, ii. pp. 249—251). At the end of last May, Mr. W. E. Clarke applied to Mr. Carter, and the first result of the latter's inquiry was to find that the Dalton collection had been dispersed by sale just a week before. Fortunately all the cases of stuffed birds had been bought by persons living in Ripon; and, having obtained

their names from the auctioneer, Mr. Carter, after many failures and some loss of time, discovered in the possession of Mr. Jacobs, the Head-master of the Choir-School in that city, the case and the specimen in question, labelled '*Procellaria bulwerii*,' which he had bought with others at the Dalton sale. Beyond this fact, however, there was no note or anything to identify the specimen with the object of the search. Mr. Carter thereupon undertook to inquire of the surviving members and connexions of the Dalton family, and, fortunately again, one of the latter, being Mr. George Clarke, of Tanfield House, Bedale, a son-in-law of Captain Dalton, was found, who not only remembered the specimen perfectly well, having seen it 'scores of times,' but produced an old manuscript note he had made on the margin of a 'Bewick' (in which he had been accustomed to record ornithological observations), to the effect that this bird was 'found dead on the Bridge at Tanfield,' and had been given to his father-in-law, who had it 'preserved by the late John Stubbs, of Ripon, fishing-tackle maker and bird-stuffer.' Mr. George Clarke also remembered the owner having several times refused the offer of twenty guineas for the specimen, and after his death had looked in vain for the specimen, which, it appears, had been put away in a lumber-room and wholly forgotten. I think, therefore, that no doubt can be entertained of our having before us the remains of the very bird which was found dead at Tanfield, as recorded by Gould, and that we are much indebted to the gentlemen concerned in hunting out this specimen, which had so long disappeared."

[We understand that the specimen which has been thus rescued from oblivion is now in the possession of Mr. W. Eagle Clarke, and that he intends to deposit it in the Yorkshire Museum.—ED.]

**The Birds'-Nest Islands of the Mergui Archipelago.** — The remarkable group of islands called by the Burmans "Ye-ei-gnet-thaik" (*lit.* sea-birds' nests) is located on the south-east side of Domel Island, one of the largest of the Mergui Archipelago. It is composed of six marble rocks, the highest and largest of which, 1000 feet in altitude, and about one mile in length, is oval-shaped, and rises very abruptly out of a depth of only five fathoms. The islands present a very striking appearance particularly if the weather is hazy, when they are not seen until within five or six miles, for then they gradually loom out through the mist like some huge misshapen monsters that have strayed away from civilization. Their sides are partly clothed with vegetation wherever a break in the limestone has left a cleft in which moisture and dust can lodge. Conspicuous because of its leaning attitudes is a species of tree-fern which grows at any angle, but only above a height of 200 feet from the water. The face of the rocks is reddish, partly from weathering and partly from soil, and where cliffs exist the most beautiful though uncouth stalactites have been formed, showing grotesque and snake-like patterns varying in hue and shape till



one feels as if in some enchanted land. But the great feature of the group is the birds'-nest caverns, which as a rule open into the sea, the entrance being below high-water mark; fortunately I visited them at spring tides, and had plenty of leisure to examine each cavern at low water during two days. At the south end of the largest island stands a "nine-pin" of grey marble 370 feet high, almost separated from the rest. It is hollow, like a huge extinguisher, and the polished light blue and yellow sides of the interior seem to point to its having been hollowed by the swell of the sea, which on entering the cave would probably expend its force vertically, the mouth of the cave being open to the direction of the strongest seas. This sea-stack forms the western point of a nearly circular cove, 360 yards in diameter, which runs back into the island, and the sides of the cove rise steeply though not perpendicularly from it. At the head of the cove is a perpendicular wall of rock over which can just be seen the 1000-foot summit in the distance. At half-tide a tunnel, passable for a canoe, opens under the wall of rock at the head of the cove, but a ship's gig can only enter within an hour of low-water spring tides. This tunnel has a roof covered with large stalactitic knobs except at its narrowest part, where it is apparently scoured smooth by the action of the tidal rush. It is about 250 feet long, and 4 feet deep at low water (the rise and fall of the tide being 16 feet), and is covered with dripping marine life, corallines, small corals, Comatulæ, sponges, and sea-horses. Passing through this submarine passage, one emerges into another circular crater-shaped basin with perpendicular sides. This basin is only open to the sky; caves here and there enter it, some of which may perhaps lead by long tunnels to other basins. Water was running freely into it from the foot of the cliffs in several places as the tide fell, showing that water spaces existed, and strange gurgling sounds as of air taking the place of water could be heard now and again. There were hardly any signs of the place being frequented by man, except here and there the worn ropes of birds'-nest climbers. It was either not the season for the Swallows, or they had deserted the islands, for none were seen. A little reddish guano was noticed in some of the caves. There can be but little traffic through the tunnel by which we entered, for the delicate growth on its sides was hardly injured. On the west side of the northern large island a lofty cavern is connected at half-tide with another nearly circular basin of about the same size as that we have just described, but in this case the basin also opens into the sea on the east side of the island. After contemplating the cliffs that surround these basins, the general circular contour of the ridges of the islands, the undermining action of the sea at the water-line, which causes in some places an overhang of 20 to 25 feet, and the softening of the marble surface of the cavern roofs by moisture, the conviction gradually forces itself on the mind that these circular basins were themselves at one time the floors of huge

caverns; that in days gone by the islands rose far higher, with cavern piled on cavern, and that the work of disintegration by solution and wave-action is slowly going on, pulling down these marble monuments of a giant age. Indeed, here and there a fall of blocks has occurred lately, and as there is no shoal off the base of the slip, the destructive action is probably rapid. A small oyster covers the rocks at the water-line. A handsome Kingfisher was secured and sent to the British Museum. A few Doves and an Eagle or two were the only other birds seen, besides a small bat in the caves. By the position of the nest-seekers' ropes, the Swallows appear to breed only on the roofs of the caves. The islands appeared to be entirely composed of a blue-tinted marble. A vessel could lie alongside them and lower the cut blocks straight into her hold, but it is probably of too poor a quality to be worth shipment.—ALFRED CARPENTER (Commander R.N., Hydrographer to the Admiralty), in 'Nature.'

**On the re-appearance of Pallas's Sand Grouse in the British Islands.**—Amongst the ornithological events of 1863, the most remarkable was the migration from Tartary and Mongolia into Western Europe of large flocks of Pallas's Sand Grouse (*Syrhaptes paradoxus*), numbers of which were met with and shot in that year in various parts of the British Islands, but chiefly in the eastern counties of England (cf. Newton in 'The Ibis,' 1864, pp. 185—222). It would seem as if the present year were to be signalised by a similar invasion of this very singular bird. For a month past I have been prepared to hear of its arrival in England, for several letters have reached me announcing its arrival in Poland and Prussia. Herr Taczanowski, writing from the Museum at Warsaw on April 26th, reported his having received, on April 24th, a female specimen which had been shot out of a flock, three days previously, in the neighbourhood of Plock, in Poland. On the 25th he received alive a male with a broken wing, which had been procured out of a flock of more than 200 on the banks of the River Pilica; another was received by him from Kouskie, south of Radom; and a pair was purchased about the same time in the Warsaw Market. Dr. Rey, of Leipzig, writing on April 28th to Prof. R. Blasius, of Brunswick, who kindly communicated the information, reported his having received two specimens, which had struck against the telegraph wires at Paunsdorf, fifteen miles east of Leipzig; and Dr. A. B. Meyer, of Dresden, in a letter addressed to the editor of 'Nature,' published on May 17th, gave a list of localities and dates at which examples of this bird had been recently met with on the Continent, commencing with those already announced by M. Taczanowski as obtained on April 21st, and ending with a specimen procured near Leipzig on May 7th. Since the last-mentioned date, Herr Möschler has reported one picked up dead under telegraph-wires at Bautzen, and I have received intelligence of the

occurrence in this country of others in small flocks at the following places:—

- May 15. *Hampshire*.—Itchen Stoke, near Winchester; one shot out of a flock of twenty by a gamekeeper of Lord Ashburton.
- „ 17. *Aberdeenshire*.—At Cruden, eight miles S. of Peterhead; one killed by a boy with a stone, out of a large flock.
- „ 18. *Yorkshire* (Holderness).—About thirty seen; twenty in one flock.
- „ 20. *Yorkshire*.—On the coast near Easington; about a dozen; two shot.
- „ „ *Oxfordshire*.—On Harcourt Hill, Bensington; five seen (two shot on 22nd).
- „ „ *Hertfordshire*.—Near Hoddesdon; a flock of forty; two shot. These were very kindly forwarded to me by the owner, Mr. F. M. Campbell, of Rose Hill, Hoddesdon, and were exhibited on May 25th, at a conversazione of the Linnæan Society at Burlington House, where they excited considerable attention and interest.
- „ 21. *Yorkshire*.—Kilnsea; one seen.
- „ 22. *Yorkshire*.—Same place; nearly a dozen.
- „ „ *Nottinghamshire*.—On the Clifton estate; seven seen; two shot.
- „ 24. *Yorkshire*.—Between Easington and Patrington; a flock of thirty.
- „ „ *Yorkshire*.—Burniston, four miles N. of Scarborough; a flock of forty; one shot.
- „ „ *Norfolk*.—Mousehold Heath, near Norwich; a flock of twenty-five seen.
- „ 25. *Yorkshire*.—Near Spurn; a flock of thirty seen.

We may doubtless expect to hear of many others. Meantime, the observations above noted may be useful in directing attention to what promises to be a repetition of the extraordinary event of 1863. It is, perhaps, too much to expect that people will refrain altogether from shooting at these distinguished Asiatic visitors, but I would strongly urge upon those who may meet with any flocks not to take too great a toll of them, but to give some pairs at least a chance of nesting here during the present breeding-season, as there is every reason to believe they might do if allowed to remain unmolested in suitable localities. At present I have only to add that as every fact concerning these birds is of interest, a note of their weight may be worth recording. Of a pair shot in Oxfordshire on May 20th (as above mentioned), the male weighed 10 $\frac{3}{4}$  oz., the female 8 $\frac{3}{4}$  oz.—J. E. HARTING.

**Pallas's Sand Grouse in Holderness.**—During a recent visit to Holderness I had many opportunities of observing in some numbers those interesting birds, the Sand Grouse, *Syrhaptes paradoxus*, which were seen in various parts of the country on or about May 20th. Three which I saw had been recently shot from a flock containing about forty birds. They

were described as being very fearless, allowing a near approach. On the 21st I watched a single bird feeding and walking about the dry sand above high-water mark near Kilnsea. On the 22nd a flock of from half-a-dozen to a dozen passed where I was standing within twenty-five yards, and as I walked on the high-road between Easington and Patrington, on the 24th, a flock of perhaps thirty crossed before me, flying in a northerly direction, having somewhat the appearance between Golden Plovers and Rock Pigeons. When flying, the note uttered was weak, and to me like "kilp, kilp"; when on the ground they had the appearance of Tumbler Pigeons, at a little distance, and had a habit of almost burying themselves in the dry, hot sand, to which their colour so closely assimilates as to render them difficult to be seen. In the case of the solitary bird seen near Kilnsea, when by any chance I lost sight of it, I again discovered its position by the frequent stoops made at it by the Lesser Terns, *Sterna minuta*, which seemed not to like its intrusion near their little colony. On my return to Scarborough, I heard of a flock of about forty being seen near Burniston, four miles north of the town, out of which a female was shot. The crops contained, in most cases, red and white clover-seed, and in the stomach I found, in addition to clover-seed, small fragments of quartz; some of those shot in Holderness contained Indian corn and linseed, supposed to have come ashore from a cargo wrecked near Hornsea.—R. P. HARPER (10, Seamer Road, Scarborough).

**Pallas's Sand Grouse near Norwich.**—On May 24th I had the pleasure of seeing a flock of about twenty-five Sand Grouse. While strolling across Mousehold Heath, within a mile or so of the city, on the afternoon of that day, my attention was drawn to some strange birds flying quickly towards me, in a south-easterly direction. As they passed near enough overhead to enable me to distinguish their pointed tails and the dark patch on the under parts, I at once recognised them as Pallas's Sand Grouse. When first noticed they were flying in a somewhat scattered line, but closed up together a little as they crossed the heath, uttering their peculiar note, and seemed to drop as they disappeared over some rising ground. In the hope of obtaining another sight of them, I followed in the same direction, but saw no more of them, and up to the present (May 26th) have not heard of their being seen again.—E. J. ELDERED (Bank House, Castle Meadow, Norwich).

**Redshank breeding near Harrogate.** — These birds have again made their appearance with us. For the last three years two pairs have nested in a marshy field on the outskirts of the town. Last year I found both nests, and I am happy to say the young from both got safely away. This year two pairs (probably the same birds) have again taken up their abode in the same field.—RILEY FORTUNE (Harrogate).



## REPTILES.

On the Geographical Distribution of Reptiles.—It is so seldom we obtain a well-authenticated instance of the fortuitous landing of a reptile on an island, far distant from the continental home of the animal, that the following record of an Alligator arriving by natural causes on the ocean-girt island of Barbados is replete with interest, as it affords an exemplification of how the geographical distribution of reptiles on islands may be brought about. In September, 1886, one of the lighthouse-keepers at Needham Point, Carlisle Bay, Barbados, informed Staff-Sergeant Charles Anderson, whose quarters were near, that there was a strange animal in the sea. Anderson took his rifle and three rounds of ammunition, and went to the beach, and there saw the head of an Alligator protruding from the water outside of the coral-reef, some forty yards from shore. Running into the water, Anderson mounted on a piece of coral-rock, and shot the reptile behind the eye; it lashed the water with its tail, and made for shore; before it reached the land Anderson put a second bullet into its head, and a third, after the reptile landed, killed it. This Alligator measured ten feet in length, and is preserved in the island. It was considered such a curiosity that Sergeant Anderson was given twenty-five dollars for the carcase, and the purchaser realized a considerable profit by its exhibition. On the same day, and within half-a-mile of the spot where the Alligator landed, a large tree came ashore. I am informed by Mr. D. M'Nicol, contractor to the Royal Engineer Department in this island, who purchased the tree, that it measured forty feet in length; the roots and part of the branches were attached to the stem; a section of it now lying in the R.E. Yard measures three feet in thickness. Mr. M'Nicol considers the tree to be the species which is called "silver bolla" in Demerara. On one point he is quite satisfied, namely, that no such tree grows on the island of Barbados. That the reptile was transported on this tree from the South-American continent, probably by the current from the Orinoco river, admits of no doubt. The distance from the mouth of the Orinoco to Barbados is about two hundred and fifty miles, and the chance of the reptile crossing that wide extent of ocean on a tree during the stormy season was very remote, while the accident of its having stranded on the small island of Barbados, the most eastern of the Antilles, is so greatly against the theory of probabilities, that the chances would be impossible to calculate. Still the fact of the animal's transport in safety remains. Supposing, however, a similar instance had occurred prior to the advent of man to Barbados, and the Alligator landing had been a female containing impregnated ova, Alligators might have been found on this little coral island, surrounded on all sides by great ocean depths. The introduction of the formidable Fer-de-lance Snake, *Craspedocephalus lanceolatus*, to the two islands of St. Lucia and Martinique, and its

singular restriction to those islands of the Lesser Antilles, may probably be explained by a similar train of circumstances to that above related.—H. W. FEILDEN (Barbados).

## MOLLUSCA.

**Mollusca of Ireland.**—We are glad to see in a recent number of the 'Proceedings of the Royal Irish Academy' (1888, p. 672) a paper by Messrs. J. W. Taylor and W. Denison Roebuck, entitled "Materials towards a Land and Freshwater Molluscan Fauna of Ireland." Although published in January last, it is stated to have been read June 28th, 1886, and probably several additions may now be made to the list of species given. Many of our readers will doubtless regret that this paper has not been printed in a journal more accessible to them.

## SCIENTIFIC SOCIETIES.

## LINNEAN SOCIETY OF LONDON.

May 3, 1888.—Dr. JOHN ANDERSON, F.R.S., Vice-President, in the chair.

The minutes of the last meeting having been read and confirmed, and donations to the Library announced, a ballot took place, and the following were elected Fellows of the Society:—A. V. Jennings, L. A. Boodle, W. Cash, and A. Henry. The following were elected Foreign Members:—Dr. A. Engler, Prof. T. Fries, Prof. R. Hartig, Dr. E. Warming, and Dr. Anton Dohrn.

The Chairman announced a resolution of the Council to found a Gold Medal, to be called "The Linnean Medal," to be awarded at the forthcoming Anniversary Meeting to a Botanist and Zoologist, and in future years to a Botanist and Zoologist alternately, commencing with a Botanist.

Dr. Francis Day exhibited some specimens of Lochleven and Sea Trout raised at Howietown to illustrate his observation that the markings usually relied upon to distinguish the species are not constant, and therefore, taken alone, of no value for the purpose of identification. He also exhibited specimens of Trout from Otago, New Zealand, descendants of some which had been introduced there, presenting some curious modifications of structure. A discussion followed, in which some interesting remarks were made by Prof. Howes and Mr. Willis Bund.

On behalf of Mr. Miller Christy, the Botanical Secretary, Mr. B. Daydon Jackson, exhibited some specimens of the Bardfield Oxlip, *Primula elatior*, Jacquin, gathered near Dunmow, and occurring only in this part of England (cf. Trans. Essex Field Club, iii. p. 141).

Mr. A. D. Michael read a paper on the life-histories of the Acari,

*Glyciphagus domesticus* and *G. spinipes*. After describing in detail observations and dissections extending over three years, the author concludes that there is a hypopial stage in the life-history of *Glyciphagus*, but far less developed than in *Tyroglyphus*, and not an active stage in the species observed; that it does not occur to all individuals of a species, and it has not been ascertained whether it occurs in all species; that the stage is not the result of dessication, or unfavourable conditions; and that it occupies the period between the penultimate ecdysis and that immediately previous. Dr. C. Stewart having criticised Mr. Michael's researches in favourable terms, a communication was made by Mr. C. B. Clarke on "Root-pressure." He contested the view of A. Sachs (and his followers) that root-pressure is sufficient to sustain the weight of a column of water of the height of 100 (or even 300) feet, and to force out drops at particular points of the leaves. He maintained that it was a mathematical error to apply the equation  $p = g p z$  to the case of water in plants, and that in a collection of cells and longitudinal tubes of varying size (all very small) the only mechanical ideas that could be applied were those of capillary attraction and motion. In the discussion which followed, Prof. Marshall Ward thought root-pressure necessary to explain the admitted results of manometer experiments; Mr. A. W. Bennett, on the other hand, regarded the assumption of a high fluid-tension in the cells of roots to drive moisture to the summits as nothing more than an expression of our ignorance as to what the water does move.

A paper, "On the Ovicells of some Lichenoporaë," having been read by the Zoological Secretary, Mr. W. Percy Sladen, in the absence of the author, Mr. A. W. Waters, the meeting adjourned to May 24th.

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#### ZOOLOGICAL SOCIETY OF LONDON.

April 17, 1888.—Dr. ST. GEORGE MIVART, F.R.S., Vice-President, in the chair.

The Secretary read a report on the additions that had been made to the Society's Menagerie during the month of March, 1888.

Dr. C. Stewart exhibited a preparation showing the structure and development of the brood-pouch of a Marsupial Tree-Frog, *Nototrema marsupiatum*.

Mr. Boulenger exhibited and made remarks on the type specimen of a new species of Marsupial Tree Frog, *Nototrema fissipes*, recently discovered by Mr. G. A. Ramage, near Pernambuco, in Brazil.

Mr. Herbert Druce read the descriptions of some new species of Heterocera collected by Mr. C. M. Woodford at Suva, Viti Levu, Fiji Islands. The collection had been made during the months of February, March, and April, 1886, and was especially interesting on account of the

exact localities being noted, as well as for the new species it contained. Ninety-four species were represented, eight of which were described by the author as new to science.

A communication was read from Mr. T. D. A. Cockerell, containing some remarks on Atavism, with reference to a paper on the same subject read by Mr. J. Bland Sutton at a previous meeting of the Society.

Prof. G. B. Howes gave an account of the vocal pouch of *Rhinoderma darwini*, and described in detail the mode of its attachment, and the position of the embryos in it. The author controverted the idea of Espada that the alimentary functions were arrested during the development of the embryos in this Batrachian.

Mr. Oldfield Thomas read a paper describing a new genus and species of *Muridæ* obtained by Mr. H. O. Forbes during his recent expedition to New Guinea. The author proposed to call this form, which was characterized by the possession of a prehensile tail, *Chiruromys forbesii*, after its discoverer.

Lieut.-Col. Godwin-Austen read the first of a proposed series of papers on the Land-Mollusca of Burmah. The present communication gave an account of the shells collected by Capt. Spratt, R.A., in Upper Burmah, amongst which were specimens of several new and very interesting species.

A communication was read from Mr. R. Bowdler Sharpe, containing the sixth of his series of notes on the specimens of the Hume collection of birds. The present paper treated of certain species of the genus *Digenea*.

May 1, 1888.—Prof. W. H. FLOWER, C.B., LL.D., F.R.S., President, in the chair.

Colonel Irby exhibited (on behalf of Lord Lilford) a specimen of *Aquila rapax* from Southern Spain, believed to be the first authentic specimen of this species known from the Peninsula.

Prof. Flower exhibited, and made remarks on, a specimen of the Japanese Domestic Fowl, with the tail-feathers enormously elongated, the longest attaining a length of nine feet. The specimen had been presented to the British Museum by Mr. F. D. Parker.

Mr. C. M. Woodford made some general remarks on the Zoology of the Solomon Islands; and read some notes on the nesting-habits of Branchley's Megapode, which lays its eggs in the sands on the sea-shore of these islands.

Mr. G. A. Boulenger read the description of a new Land Tortoise of the genus *Homopus* from South Africa, based on specimens living in the Society's Gardens, which had been presented to the Society by the Rev. G. H. R. Fisk. The author proposed to name the species *H. femoralis*.

Mr. F. E. Beddard read the second of his series of notes on the visceral anatomy of birds. The present paper treated on the air-sacs in certain diving birds.



Mr. Francis Day read the first of a proposed series of observations on Indian Fishes.—P. L. SCLATER, *Secretary*.

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ENTOMOLOGICAL SOCIETY OF LONDON.

May 2, 1888.—Dr. D. SHARP, F.L.S., President, in the chair.

Major J. W. Yerbury, R.A., of the Army and Navy Club, Pall Mall, S.W.; and Mr. P. W. Mackinnon, of Masuri, Western Himalayas, India, were elected Fellows.

Dr. Philip Brooke Mason exhibited an hermaphrodite specimen of *Saturnia carpini* from Lincoln, and another specimen of the same species with five wings, bred at Tenby.

Herr Jacoby exhibited female specimens of *Chrysomela japona*, collected by Mr. J. H. Leech in Japan, and called attention to a sexual structure in the middle of the abdominal segment.

Mr. Adkin exhibited a variety of *Eubolia bipunctaria*, taken at Box Hill, in July, 1886.

Mr. W. F. Kirby exhibited, for Dr. Livett, a curious discoloured female specimen of *Ornithoptera minos*, Cramer.

Mr. H. Goss exhibited, for Mr. W. Denison-Roebeck, a number of specimens of an exotic species of Bee obtained by the Rev. W. Fowler, of Liversedge, from split logwood. The cells or pouches were very irregular and rough, and altogether unlike those in the "comb" of any known British species of Bee.

Dr. J. W. Ellis read a paper entitled "Remarks on the British specimens of the (so called) *Aphodius melanostictus*, Schmidt"; and exhibited a number of specimens and drawings of this species and of *Aphodius inquinatus*, F. A discussion ensued, in which Dr. P. B. Mason, Dr. Sharp, Mr. Champion took part, and Dr. Ellis replied.

Mr. E. Meyrick communicated a paper "On the Pyralidina of the Hawaiian Islands," the materials for which consisted principally of the collection of Lepidoptera Heterocera formed by the Rev. T. Blackburn during six years' residence in the Hawaiian Islands. Mr. Meyrick pointed out that the exceptional position of these islands renders an accurate knowledge of their fauna a subject of great interest. He stated that of the fifty-six known species of Hawaiian Pyralidina nine had been probably introduced through the agency of man in recent times; but he believed the remaining forty-seven to be wholly endemic: of these the author referred twenty-six species to the *Botyridæ*, twelve to the *Scopariadæ*, four to the *Pterophoridaæ*, three to the *Crambidaæ*, and two to the *Phycitidaæ*. Dr. Sharp, Mr. McLachlan, Dr. Mason, and Mr. E. B. Poulton took part in the discussion which ensued.—H. Goss, *Hon. Secretary*.

